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PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

| EXAMINER | |
|---|---|
| SHAY, DAVID M | |

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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Paper No. 3302006



Application Number: 09/097,383
Filing Date: June 16, 1998
Appellant(s): Christiansen, Kare

John P. Darling
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 16, 2006.

*(1) Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

*(2) Related Appeals and Interferences*

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

*(3) Status of Claims*

The statement of the status of claims contained in the brief is incorrect, as only claims 13, 8, 10-15, 18, and 23-25 are identified as finally rejected. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-3, 10-15, 18, and 23-25.

*(4) Status of Amendments After Final*

The amendment after final, filed concurrently with the Brief on Appeal (January 16, 2006) has been entered.

*(5) Summary of Claimed Subject Matter*

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because with regard to claim 2, element 24 of Figure 2 (which is the water) is erroneously identified as part of the means for defining a

flow path. Elements 22 and 25 in Figures 2 and 3 are actually the other elements in these figures which constitute such means.

***(6) Grounds of Rejection to be Reviewed on Appeal***

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

***(7) Claims Appendix***

The copy of the appealed claims contained in the Appendix to the brief is correct.

***(8) Listing of Evidence Relied Upon***

The following is a listing of the prior art of evidence (e.g. patents, publications Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

| Number (Title) | Name | Date |
|---|---|---|
| 3,703,176 | Vassiliadis et al | November 21, 1972 |
| 5,320,618 | Gustafsson | June 14, 1994 |
| 5,620,478 | Eckhouse | April 15, 1997 |
| 5,785,844 | Anderson et al | April 7, 1998 |
| "High Performance Flash and Arc Lamps" | Unknown | Unknown, Rec'd in PTO, 1/1995 |
| Data Sheet for OG 550 Filter | Unknown | June 1997 |

***(9) Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claims 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that

the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed disclosure is silent on the form which a "means for adjusting the time weighted average light power output" would take. Thus one would not know what structure would perform the function set out in the means plus function limitation.

Claims 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Eckhouse.

See figures 1-4, 8-10, and 15-18 and column 5, line 9 to column 12, line 42. Eckhouse discloses an apparatus for pulsed light cosmetic or therapeutic photo treatment comprising a housing (see Figure 1, element 12); a gas filled arc lamp light source within the housing to produce a pulsed light output, (see Figure 1, elements 14); the and a light output aperture defined by the iris (see Figure 1, element 20). Eckhouse teaches a light source in the form of flash lamp 14. For example at column 5 lines, 14 through 20 Eckhouse discusses light source 14 having an outer glass tube, an elliptical reflector, a set of optical filters, 18 and iris 20 further, light source 14, located in housing 12 can be a typical incoherent light source such as a gas filled linear flash lamp, and notes that the flashlamp produces pulse widths in the range of $10^{-5}$ to $10^{-1}$ seconds (or 10 microseconds to 100 milliseconds). Eckhouse also discloses the embodiments of Figures 4 and 8, wherein an optical fiber is placed at one focus and the lamp at the other (see column 9, lines 28-37) and using water in the flashlamp, with respect to these embodiments (see e.g. column 10, lines 4-10), and notes prior to the discussion of these embodiments that "[S]such a device may be similar to that shown in FIGS. 1 and 2, and may use the electronics of FIG. 3 to produce the flash" (see column 8, lines 58-60) the water is considered to act as a filter in the device of Eckhouse to the same extent as in the claimed device, since Appellant discloses no special additive, treatment or means to alter the physical properties of the water used in the

instant device. The OG550 filter recited at column 10, line 61 fulfills recitation (a) of claim 1 as evidenced by the inherent transmission characteristic of the filter as evidenced by the manufacturer's datasheet disclosing the properties thereof (of record). Lastly, Eckhouse discloses that the device can produce up to 300 J/cm$^2$ at the focal area (see column 12, lines 26-29). It is noted that the claim recites "said filtered light pulse has an energy of at least 250 J/cm2/sec", however, as the pulses are less than 1 second long any 1 second period bracketing at least one pulse will result in at least "an energy of at least 250 J/cm2/sec".

Claims 1-3, 8, and 23 are rejected under 3 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Gustafsson. Eckhouse teaches a device as claimed except for the specific recitation of the flow path. Gustafsson teaches a xenon lamp (see Figures 2 and 3, elements 112, and column 2, lines 53-57); using circulating water to cool flash tubes (see Figures 2 and 3, elements 80-84); and an optical fiber applicator with a convex tip (see Figures 2 and 4A, elements 98, 114, 115, and column 3, lines 46-60). It would have been obvious to the artisan of ordinary skill to employ the lamp and cooling system; of Gustafsson in the device of Eckhouse, since Eckhouse gives no particular coolant system design, and since the cooling system of Gustafsson makes the lamp much more effective (see column 2, line 62 to column 3, line 6), thus producing a device such as claimed.

Claims 10-15, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Gustafsson as applied to claims 1, 3, and 23 above, and further in view of Anderson et al and "High Performance Flash and Arc Lamps" (hereinafter Optoelectronics). Optoelectronics teaches the use of power supplies that use simmers circuits (see page 12, Figure O) and apply square pulse to the flash tube (and page 15, Figure U).

Anderson et al teach the use of square wave optical pulses (see Figure 5A and column 10, lines 15-20) and a convex applicator tip (see Figure 2A and column 5, line 21-column 7, line 65, but especially column 6, lines 49-66). It would have been obvious to the artisan of ordinary skill to employ an applicator tip as taught by Anderson et al since this allows treatment of a larger area, as taught by Anderson et al; to employ the square wave light pulses therein, since this allows a more uniform optical field; to apply a simmer circuit and a power supply to produce square current pulses, since these will aid in the production of flat topped optical pulses, which is desirable as taught by Anderson et al; and to provide a concave or parallelepiped shape at the light guide distal end, since these are equivalent to the convex tip and provide no unexpected result, thus producing a device such as claimed.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhouse in combination with Gustafsson as applied to claims 1-3 and 23 are above, and further in view of Vassiliadis et al. Vassiliadis et al teach the desirability of employing an interlock on a filter (see Figure 5, elements 58-65 and column 5, lines 29-51). It would have been obvious to the artisan of ordinary skill to employ an interlock on the filter in the device of Eckhouse or Gustafsson since this would provide a safer device, thus producing a device such as claimed.

*(10) Response to Argument*

**Claim 15 is not discribed under 35 USC 112, 1st Paragraph**

With regard to the issue of the rejection of claim 15, under 35 USC 112, 1st paragraph, appellant proffers no arguments per se, but points to the originally filed disclosure at Figures 1 and 6(a)-(c); page 18, line 24 to page 19, line 19; and page 22, lines 1-24, in the description of claimed subject matter. The examiner notes that while Figures 1 and 6(a)-(c) and the disclosures

bridging pages 18 and 19 and on page 22 do discuss the use of a PC (personal computer) to trigger the power supply, in the absence of even the broadest outline of the control scheme by which the claimed optical output power is produced, this disclosure is insufficient to describe the means plus function recitation under 112, 6th paragraph as required by MPEP 2181 (II).

**Claim 1 is clearly anticipated by Eckhouse under 35 USC 102(b)**

Appellant's arguments regarding this rejection are essentially that even if the applied reference could be construed to contain all of the structural elements recited in claim 1, that these elements, are disclosed in various subcombinations of those claimed, all the subcombinations being drawn to separate and non-combinable embodiments. Appellant argues instead that the embodiments of figures 1 and 2 of Eckhouse; those of Figures 4 and 8-10 of Eckhouse; and those relating to the use of discrete Schott filters are separate and not taught as combined within the four corners of the Eckhouse reference. These arguments fall, however, first in the face of the disclosure at column 8, lines 58-63, which specifically states, with regard to the embodiments of Figures 4 and 8-10, such a "device may be similar to that shown in FIGS. 1 and 2..."; and second, with respect to the various types of fibers and light guides (discussed, e.g. at column 10, lines 24-30) including light guides "shaped to match the vessel being treated" (discussed at column 10, lines 48-50) in the face of the disclosure at column 10, lines 46-63, which specifically states, that "a flat, discrete filter may be added to one end (preferably the input end of the light guide...absorbing filters produced by Schott, having Model Nos. OG515, OG550, OG570, and OG590 have suitable characteristics." With regard to the disclosure of Eckhouse at column 8, lines 58-63, appellant offers no specific argument. It is noted that appellant does repeatedly state that Eckhouse does not contemplate the use of two filters. However, the

examiner notes that the water of Eckhouse will perform the same filtering function as that of appellant, regardless of Eckhouse's intent for or knowledge of it's doing so. With regard to the disclosure of Eckhouse at column 10, lines 46-63, appellant in the first paragraph on page 10 of the instant Brief, asserts that an "intervening passage" at lines 27-30 of column 10 of Eckhouse discusses "devices for industrial or domestic use" and asserts that the remainder of the column refers to such devices as distinguished from those for invasive medical applications. It is useful to reproduce the passage to which Appellant refers: "In other applications, particularly in industrial or domestic applications, it may be preferable to use a fiber having a larger diameter, or a larger bundle of fibers, or a **light guide**." (emphasis added). While this interpretation is noted, it too is flawed in that the remainder of the column discusses the use of "a rectangular **light guide**" (emphasis added) wherein "the rectangular **light guide** is chosen to have a shape which matches...the shape of the vessel being treated" (emphasis added). Thus clearly the passage at column 10, lines51-62 of Eckhouse is directed to the use of filters with light guides that are treating vessels. In the paragraph bridging pages 11-12 of the instant Brief, appellant asserts that the reference to "the vessel being treated" is related to the "domestic and industrial applications" as opposed to the "cosmetic or therapeutic environment" discussed in the remainder of Eckhouse. However, appellant does not elucidate the manner in which the treatment of a blood vessel falls outside the area of "a cosmetic or therapeutic environment", but broadly asserts that the disclosure of vessel treatment "is irrelevant in that it is part of the discussion of one alternative embodiment described in its totality between lines 46 and 50 of column 10, to which the Schott filters of line 60 have no connection". Essentially appellant is arguing that each succeeding embodiment of Eckhouse merely relates only to the specific

structure described in that particular embodiment, and cannot be construed to be used in conjunction with any other disclosed structure of Eckhouse which would produce a functioning device, such as the flash lamp or the housing thereof. This focus on minutia is incompatible with the interpretation of the reference which would be given by the artisan of ordinary skill. It is also incompatible with the general teachings of Eckhouse, which even with respect to the Schott filter embodiment, states "the use of filters described here may render the use of the filters described earlier with reference to FIGS. 1 and 2" and thus clearly refers back to previously disclosed structures of this reference. Lastly in the first full paragraph of page 13 of the instant Brief, appellant argues that "it is obviously more difficult to transmit a sufficient amount of light via a fiber than through a light guide" but points to no evidence of record to support this "obvious" conclusion. Appellant has pointed to no substantial difference between the materials forming the optical fibers and those forming the light guides. In fact at column 10, lines 4-10 it is expressly stated that the use of water "reduces the losses that are associated with the glass to air transition" while the disclosure at column 10, lines 36-38 states that "rigid light guides may be made from quartz, acrylic, **glass**, or other materials having a high degree of transparency" (emphasis added). Thus using the evidence of record, it is clear that the same concerns are present when using a glass fiber or a glass light guide with respect to the use of water. Thus appellant's arguments to the contrary are not convincing.

**Claims 1-3, 8, and 23 are obvious over Eckhouse in view of Gustafsson under 35 USC 103**

With regard to the rejection based on Eckhouse and Gustafsson, appellant argues that one having ordinary skill in the art would immediately assume every difference other than the

use of circulating water, between the lamp system of Figure 1 and that of Figure 2 in Gustafsson is responsible for rendering the latter embodiment "much more effective". However, appellant has offered no evidence other than this unsupported allegation for this opinion. The examiner respectfully submits that it is the totality of the differences in construction, including the use of circulating water in a cooling system. Clearly the use of a larger body of water which is circulated will offer greater cooling than the cooling of a stationary mass of water in the device of Eckhouse. Thus this argument is not convincing and the motivation for combination is proper.

Appellant also defends the requirement for a "strong" motivation asserting that the disclosures of Gustafsson and Eckhouse teach away from each other, as set forth in the second full paragraph on page 19 of the instant Brief. However, as set forth in the paragraph bridging pages 19 and 20, this misapprehension appears to be based on the erroneous assertion that the embodiment of Figures 1 and 2 of Eckhouse cannot be combined with those of e.g. Figures 4 and 8 thereof and as such are not persuasive.

In response to the examiner's request for an explanation of how the water is prevented from filtering light form the flashlamp, appellant then takes special effort to assert that "[N]none of the light output of the flashlamps passes to the output light aperture" explaining with regard to the light output of the flashlamp that "all of it is absorbed somewhere". Appellant has provided no citation in Gustafsson to support this theory. In fact Gustafsson specifically states that the dye "changes blue-green light to yellow light" making no mention of how any other wavelengths from the flash lamp would be prevented from exiting the device. Appellant's assertion that all the light is

somehow absorbed, and thus does not exit the device is simply not supported by the record.

**Claims 10-15, 24 and 25 are obvious over Eckhouse in combination with Gustafsson as applied to claims 1, 3, and 23 above, and further in view of Anderson et al and "High Performance Flash and Arc Lamps" (hereinafter Optoelectronics) under 35 U.S.C. 103(a)**

With regard to these claims, appellant merely argues that the additional references do not remedy the deficiencies of the base combination. However, as set forth above, the base combination is not deficient, thus this argument must fail.

**Claim 18 are obvious over Eckhouse in combination with Gustafsson as applied to claims 1-3 and 23 above, and further in view of Vassiliadis under 35 U.S.C. 103(a)**

With regard to these claims, appellant merely argues that the additional reference does not remedy the deficiencies of the base combination. However, as set forth above, the base combination is not deficient, thus this argument must fail.

*(11) Conclusion*

It is the examiner's firm opinion that the appealed claims are not patentable for the reasons argued above. Appellant has presented no convincing argument as to why the rejections set forth above are not obvious or proper. Therefore, it is respectfully submitted that the final rejection be affirmed

Respectfully submitted,

DAVID M. SHAY
PRIMARY EXAMINER
GROUP 330

David Shay
April 5, 2006

Conferees
Patricia Bianco
Karen Hastings
David Shay

KM Hastings
TQAS, TC 3700

PATRICIA BIANCO
PRIMARY EXAMINER

PILLSBURY WINTHROP SHAW PITTMAN LLP
P.O.BOX 10500
MCLEAN, VA 22102